Clavicle Fractures

C. Kevin Martin, PA–C
Bone and Joint
Epidemiology

- 5–10% of all fractures
- Most often seen in young patients
  - Men > Women
- Mid shaft 75–80%
- Distal third 15–25%
- Medial third <5%
Anatomy and Function

- Divided into thirds
  medial, mid-shaft, distal
  mid-shaft thinnest
- Associated joints
  AC and SC joints
- Connects axial skeleton to upper extremity
- Protects neurovascular structures
  subclavian vessels and brachial plexus
Pathophysiology

- Fall on an outstretched arm
- Direct trauma to lateral shoulder
Presentation and Examination

- C/O pain over affected side
- Affected arm held close to the body
- Deformity affected side

- Ecchymosis, edema, tenderness
- Complete neurovascular exam affected arm
- Lung examination
Radiography

- X-rays
  - AP view and tangential (15° cephalic tilt)

- CT scan
  - Evaluate displacement, shortening, comminution, nonunion, articular extension
Treatment mid-shaft fractures

- Non-operative
  - Immobilization (sling vs. Figure 8)
  - 1–2 weeks
  - Pendulum exercises with progression as fracture heals

- Operative
  - Clavicle shortening >2 cm, comminution, open fracture, subclavian vessel or nerve injury, symptomatic mal or nonunion
Return to sports mid-shaft fracture

- Full range of motion
- Normal strength
- Radiographic evidence bone healing
- Non-tender to palpation
- Usually 6 weeks ADLS and non-contact sports
- 2–4 months for contact sports
Proximal clavicle fractures

- Non-displaced
  Treatment is the same as non-op mid-shaft
- Displaced
  Reduction if posteriorly displaced and causing compromise
  CT scan to fully evaluate
Distal clavicle fracture

Neer classification

Type 1 (coracoclavicular ligament intact)
Type 2 (coracoclavicular ligament disrupted)
Type 3 (extension into AC joint)
Type 4 (periosteal sleeve disrupted)
Type 5 (avulsion of ligament)
Treatment

- Operative versus non-operative
  Depends on where fracture occurs in relation to the ligament
References

References upon request